



# Coursera Capstone

Opening a New Restaurant in Mumbai, India

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# Business Problem



- Location of the restaurant is one of the most important decisions that will determine whether the restaurant will be a success or a failure.
- Objective: To analyze and select the best locations in the city of Mumbai, India to open a new restaurant.
- This project is timely as the city is currently suffering from oversupply of restaurants.
- Business question
  - In the city of Mumbai, India, if a property developer is looking to open a new restaurant, where would you recommend that they open it?



# Data



- Data required

- List of neighborhoods in Mumbai.
- Latitude and longitude coordinates of the neighborhoods.
- Venue data, particularly data related to restaurants.

- Sources of Data

- Wikipedia page for neighborhoods  
([https://en.wikipedia.org/wiki/List\\_of\\_neighbourhoods\\_in\\_Mumbai](https://en.wikipedia.org/wiki/List_of_neighbourhoods_in_Mumbai))
- Geocoder package for latitude and longitude coordinates.
- Foursquare API for venue data



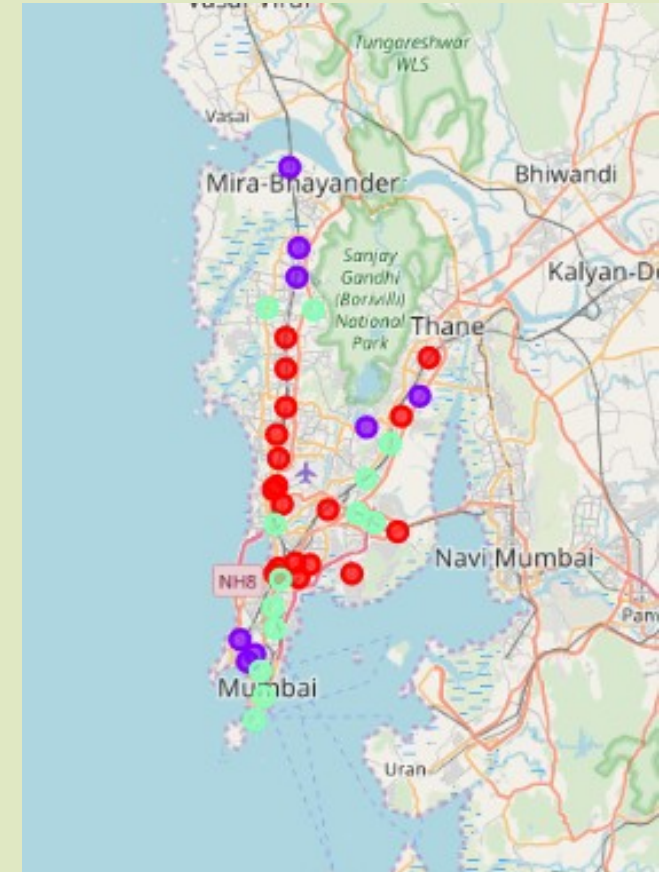
# Methodology



- Web scraping Wikipedia page for neighborhoods list.
- Get latitude and longitude coordinates using Geocoder.
- Use Foursquare API to get venue data.
- Group data by neighborhood and taking the mean of the frequency of occurrence of each venue category.
- Filter venue category by Restaurant.
- Perform clustering on the data by using k-means clustering.
- Visualize the clusters in a map using Folium

# Results

- Categorized the neighborhoods into 3 clusters :
  - Cluster 0: Neighborhoods with low number to no existence of restaurants.
  - Cluster 1: Neighborhoods with high concentration of restaurants.
  - Cluster 2: Neighborhoods with moderate number of restaurants.





# Discussion



- Most of the restaurants are concentrated in the Northern areas of Mumbai city.
- Highest number in cluster 1 and moderate number in cluster 2.
- Cluster 0 has very low number of restaurants in the neighborhoods.
- Oversupply of restaurants mostly happened in the Northern areas of the city, with the suburb area like South Mumbai still have very few restaurants.



# Recommendations



- Open new restaurants in neighborhoods in cluster 0 with little to no competition.
- Can also open in neighborhoods in cluster 2 with moderate competition if have unique selling propositions to stand out from the competition.
- Avoid neighborhoods in cluster 1, already high concentration of restaurants and intense competition.



# Conclusion



- Answer to business question: The neighborhoods in cluster 0 are the most preferred locations to open a new restaurant.
- Findings of this project will help the relevant stakeholders to capitalize on the opportunities on high potential locations while avoiding overcrowded areas in their decisions to open a new restaurant.





Thank You!